REMARKS

Claim Status

Claims 17-22 are currently pending.

Specification

The examiner objected to the disclosure for informalities. Specifically, the examiner objected to limitation (g) in claim 22, which was disclosed in original claim 8, "the depth of the corrugations being greater than the thickness of the wall by a ratio of greater than three to one", is not disclosed in the specification.

The applicant respectfully disagrees with the examiner. Support for this limitation may be found in paragraph 21, which specifically states that the "corrugation shape that is three to ten times deeper in width than the thickness of the electroplated thin wall blade" and paragraph 54, which specifically states that "the thickness of the nickel matrix is about one-fifth the depth of the corrugation". However, in order to advance the present application to issue, the applicant has amended paragraph 54, above to specifically state "Preferably the depth of the corrugations is greater than the thickness of the matrix wall by a ratio of greater than three to one", said amendment being specifically supported by the claims which are themselves a part of the specification and disclosure.

Therefore, the applicant respectfully requests that the examiner withdraw the instant objection.

Claim Objections

The examiner has objected to claims 20 and 22 for informalities, specifically:

On line 2 of claim 20, the phrase "the raised portions and the lowered portions" should be replaced with "the raised surfaces and the lowered surfaces.

On lines 1-2 of limitation (g) in claim 22, the phrase "said wall" should be replaced with "a wall".

The applicant thanks the examiner for this attention to detail. The applicant has amended claim 20 above to reflect the examiners thoughtful correction. However, in claim 22, (g), instead of replacing "said wall" with "a wall" the applicant has replaced "said wall" with "said corrugated shaped blade" since this more correctly describes the correct relationship between the thicknesses.

Therefore, the applicant respectfully requests that the examiner withdraw the instant objections.

Claim Rejections – 35 U.S.C. § 102

The examiner has rejected claims 17, 18 and 20 as being anticipated by US patent 6,098,609, issued to Ishizuka.

In regard to claim 17, the examiner feels that Ishizuka discloses the same invention, including a saw blade comprising a matrix for encapsulating large and small abrasive particles in the matrix, the small abrasive particles being encapsulated inside the matrix in a high-density concentration, the blade being corrugated with substantially uniform thickness and comprising raised surfaces and lowered surfaces, the lowered surfaces being parallel to and spaced laterally and longitudinally of the raised surfaces, the transition portions connecting the raised surfaces and lowered surfaces.

The applicant respectfully disagrees with the examiner. Ishizuka discloses a saw blade that starts out as a base member onto which a matrix of a single grade size abrasive is electrodeposited. The applicant's saw blade contains no base member onto which a matrix is deposited but is made entirely (with the exception of mounting mechanisms) of matrix

material and both large and small abrasive elements. The inclusion of a base member onto which the matrix would be deposited would be a material change to the instant invention. Accordingly, the applicant has specifically amended claims 17 and 22 to replace the open ended transitional wording "comprising" with the relatively closed "consisting essentially of' with the express purpose of excluding a base member upon which the matrix would be deposited.

Further, the examiner feels that Ishizuka discloses, inherently, that some of the abrasive materials would be both large and small abrasive materials.

The applicant respectfully disagrees with the examiner. In the manufacture of these types of blades, small abrasives are a common element. These small abrasives are categorized by the sizes of meshes they may be sieved through and excluded by. Thus abrasive sizes are named by their mesh size. Ishizuka clearly illustrates this (see example 1 for example where Ishizuka calls for "a layer of 60/80 mesh metal bond grade synthetic diamond particles". In this, Ishizuka is calling for one size of abrasive, one that falls through a size 60 mesh, but does not fall through a size 80 mesh. Throughout Ishizuka, only one size of abrasive is used for the manufacture of the blade. Nowhere in Ishizuka does Ishizuka mix different grades of abrasive for inclusion in the cutting matrix. At most, Ishizuka uses a smaller grade abrasive that is layed down in a separate portion of the base member from the cutting matrix. This separate portion of the base piece is used to polish the cut, and is not used in the cutting process. Please see Ishizuka columns 4, lines 63-67, which states: "Finer graded particles of superabrasive, than in said mass (the cutting mass), may be deposited in an area **adjacent** to the cutting edges up to an elevation above each body surface level, so that polishing can be done simultaneously in the process of cutting or

drilling". See also Column 5, lines 32-37, Examples 3 and 10 all of which restated and detail the same. In the instant application, the applicant is calling for two separate grades of abrasive, a larger grade and a small grade to be mixed together into the matrix material. The benefit of this is that while the larger grade abrasive performs as a cutting element, the smaller grade, which is imbedded in the matrix material surrounding the larger abrasive particles act as a hard surface that prevents pieces of the cut material from abrading the relatively soft matrix material, thereby greatly extending the life of the blade.

Therefore, since there is no teaching or suggestion of a commingling of two separate abrasive grade elements in Ishizuka, Ishizuka cannot anticipate this element of the applicant's invention.

In regard to claims 18 and 20 the examiner feels that Ishizuka discloses that the blade is corrugated with substantially uniform thickness (as Ishizuka element 31) that comprises raised surfaces and lowered surfaces (in Fig. 3B) that are substantially flat.

The applicant respectfully disagrees with the examiner. Ishizuka element 31 is a base member upon which a matrix containing abrasive materials is electro deposited. This corrugated base member is relatively soft and cannot act as a corrugated saw blade. In the instant application there is not base member, and claims 17 and 22 have been amended above to specify the lack of a base member. While the Ishizuka base member may be corrugated, the saw blade is self is not corrugated since Ishizuka fills in the corrugate depressions with abrasive containing matrix (Fig 3C and 3D, all of Figs 4 and all of Figs 5), thereby resulting in a relatively smooth, non-corrugated blade, with no raised or lowered saw blade surface, let alone angled transitional portions. The applicant's invention is for a blade that is corrugated as a final product and not as an intermediate step only.

Therefore, Ishizuka does not anticipate this element of the instant invention.

For these above reasons, the applicant respectfully requests that the examiner withdraw the instant rejections.

Claim Rejections – 35 U.S.C. § 103

The examiner has rejected claim 19 as being obvious over Ishizuka in view of Tintelnot (5,971,841). The examiner feels applies Ishizuka as above and utilizes Tintelnot to disclose that transition portions are at a 45° angle to the raised and lowered surfaces.

The applicant respectfully disagrees with the examiner. The applicant has distinguished Ishizuka above. As for Tintelnot, Tintelnot discloses a soft scrubbing cloth with a wavy surface that has 45° angles on the wavy surface. There is no teaching or suggestion in either Ishizuka or Tintelnot, either individually or in combination, that one of ordinary skill in the arts would combine a flat saw blade (Ishizuka) with a foam wash cloth (Tintelnot) to form a saw blade with a corrugated surface, let alone a corrugated surface with transition elements at 45° angles relative to raised and lowered elements of the corrugated saw blade. Accordingly, Tintelnot cannot be properly combined with Ishizuka to discloses all of the elements of the instant invention, especially as they are now claimed after the above amendments.

Regarding claim 22, the examiner has rejected claims 22 as being obvious over Ishizuka. The examiner cites Ishizuka as above as disclosing a corrugated saw blade. The examiner asserts that it would have been obvious to one of ordinary skill in the arts to have a corrugated saw blade with a depth to thickness ration of greater than 3 to 1.

The applicant respectfully disagrees with the examiner. The applicant has distinguished Ishizuka above as not disclosing a corrugated saw blade. Further since

Ishizuka does not properly disclose a corrugated saw blade it, there is no teaching or suggestion, either in Ishizuka or in the field that one of ordinary skill, knowing of Ishizuka, a flat saw blade, would produce a corrugated saw blade with a depth to thickness ration of greater than 3 to 1.

Therefore, the applicant respectfully requests that the examiner withdraw the instant rejections.

Respectfully submitted,

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On February 15, 2006 By: